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**PATENT ABSTRACTS OF JAPAN**(21) Application number: **10128453**(51) Intl. Cl.: **C23F 1/12 H01L 21/306**(22) Application date: **12.05.98**(30) Priority: **13.05.97 GB 97 9709659**(43) Date of application  
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contracting states:(71) Applicant: **SURFACE TECHNOL SYST LTD**(72) Inventor: **MCQUARRIE ANDREW DUNCAN  
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**(54) METHOD FOR  
ETCHING WORK AND  
APPARATUS THEREFOR**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To improve the efficiency of an etching stage by continuously supplying gaseous XeF<sub>2</sub> and executing etching while the etching is heretofore executed by pulsatively supplying gaseous XeF<sub>2</sub>.

**SOLUTION:** An XeF<sub>2</sub> supplying section 12 consists of an XeF<sub>2</sub> source chamber 16 including a tray and ampoule 17 for an XeF<sub>2</sub> crystal 17a, a tank 18 via a valve 19, a flow rate controller 13 supplied with this material by the tank 18 and a valve 20 between the tank 18 and the flow rate controller 13. Pressure sources 21, 22 are provided respectively to maintain the tank 18 and the XeF<sub>2</sub> source chamber 16 at the sublimation pressure of the XeF<sub>2</sub>. This apparatus ensures the stable supply of the XeF<sub>2</sub> to an etching chamber.

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